

Thus, the Commission should avoid an unduly restrictive interpretation of “necessary” that leads to the nonsensical outcomes of forcing manufacturers to create less efficient equipment, requiring competitors to purchase old equipment, or allowing incumbents to force their competitors to disable certain functions on collocated equipment.⁵⁰ None of these results serves the goals of the Act to “encourage the deployment on a *reasonable* and *timely* basis of advanced telecommunications capability to all Americans”⁵¹ through “the *effective* and *efficient* interconnection of public telecommunications networks”⁵² and “rapid deployment of *new telecommunications technologies*.”⁵³

B. Competitive Equality Demands that DSL Providers Have the Option of Placing Line Cards in NGDLC For Access to UNEs

As the telecommunications industry continues to push manufacturers to include more functionality into smaller pieces of equipment, the market has seen much of the functionality of a DSLAM, which takes up an entire shelf in a standard central office collocation rack, incorporated into a line card that can be inserted into the Next Generation Digital Loop Carrier (“NGDLC”) chassis.⁵⁴ The concept behind the “next generation” of advanced services equipment is to develop the electronics so that Digital Loop Carrier (“DLC”) can support

⁵⁰ Joint Declaration ¶¶ 9, 14-18. Moreover, several ILECs have recognized the CLECs need to collocate equipment that has switching functionality. On September 19, Qwest announced that it will allow “collocation of high-speed packet data switches in Qwest central offices.” *Qwest Communications Announces Landmark Initiative to Open Local Communications Market*, <<http://www.qwest.com/home.html>> (Sept. 19, 2000). Additionally, SBC has recognized CLECs’ ability to collocate their ATM switches in their collocation areas at the ILEC premises. Technical Reference Notice for Broadband Service Phase 1, Draft Issue 0.2 (Aug. 11, 2000) at 17.

⁵¹ 47 U.S.C. 157 nt. (Sec. 706(a)) (emphasis added). To affect this purpose, the Commission may utilize “measures that promote competition in the local telecommunications market” or that “remove barriers to infrastructure investment.” *Id.*

⁵² 47 U.S.C. § 256(b)(1) (emphasis added).

⁵³ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, codified at 47 U.S.C. §§ 151 et seq. (1996 Act) Preamble. emphasis added.

⁵⁴ Joint Declaration ¶¶ 88, 112.

advanced services over an increasing number of fiber facilities in an effort to obtain more bandwidth for the transmission of data.⁵⁵ In the NGDLC network, the construct of the loop is essentially the same, except the multiplexing must be done where the fiber optic feeder and the copper facility meet at the remote terminal.⁵⁶ The most efficient and effective means of interconnecting at the remote terminal is therefore through the collocation of a line card with the DSLAM functionality in the NGDLC chassis.

The Act gives CLECs the right to interconnect their networks with the ILEC network at any technically feasible point.⁵⁷ CLECs are permitted to collocate at the central office, the remote terminal or other ILEC premises, as well as other technically feasible locations.⁵⁸ These rules thus entitle competitors to collocate line cards in the NGDLC chassis as “equipment necessary for interconnection or access to unbundled network elements” under Section 251(c)(6). These DSL-capable line cards are “directly related to” interconnection and access to unbundled elements, and an inability to collocate such line cards would interfere with the ability of Rhythms to compete effectively and efficiently in the advanced services market. Line cards are thus advanced services equipment that is necessary and that CLECs should be able to collocate in the DLC equipment at the remote terminal.

Line cards—which provide the DSLAM functionality in the NGDLC network architecture—are “directly related to” interconnection and access to unbundled elements. They are literally the point and method of interconnection with ILEC networks. The line cards

⁵⁵ See, e.g., Newton’s Telecom Dictionary at 270.

⁵⁶ Joint Declaration ¶¶ 83, 90-93.

⁵⁷ 47 U.S.C. § 251(c)(2); 47 C.F.R. § 51.321.

⁵⁸ 47 U.S.C. § 251(c)(6); 47 C.F.R. § 51.321; *First Report & Order* ¶ 26; *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, Third Report and Order, FCC 99-238 (rel. Nov. 5, 1999)(“*UNE Remand Order*”) ¶ 210.

actually substitute for a traditional DSLAM when a particular loop is served by a transmission facility that contains fiber optics.⁵⁹ In the NGDLC loop network, the line cards establish the parameters of the advanced service that the carrier provisions to its customer.⁶⁰ In other words, the line cards contain the electronics that generate and receive the data transmissions carried across the unbundled loop from the end user through the remote terminal back to the central office.⁶¹ Rhythms thus accomplishes interconnection with the incumbents' NGDLC loop network by plugging its line card into the ILECs' NGDLC chassis in the remote terminal.

Without the ability to collocate line cards in the ILEC NGDLC chassis at the remote terminal, Rhythms, and other DSL providers, would not be able to compete efficiently and effectively with the advanced services of the ILECs or their advanced services affiliates for several reasons. First, Rhythms must have electronic equipment in the remote terminal to perform the DSLAM functionality between the fiber and copper portions of the loop.⁶² As detailed in III.C., it will frequently be impossible to place a central office style DSLAM in the tight quarters of an ILECs' remote terminal, due to either space exhaustion or economic infeasibility.⁶³

Second, because the speed of the DSL service available to consumers is directly proportional to the length of copper over which DSL is deployed, forcing advanced services competitors to place DSLAM at the ILEC central office requires them to offer a noncompetitive service. That is, because the ILEC would be offering DSL over a significantly shorter copper

⁵⁹ Joint Declaration ¶¶ 73, 112.

⁶⁰ Joint Declaration ¶¶ 111-118; *See also* ¶¶ 108-110.

⁶¹ Joint Declaration ¶ 73.

⁶² Joint Declaration ¶¶ 83-84.

⁶³ Joint Declaration ¶ 85.

facility (*i.e.*, the copper between the end user and the remote terminal). As a result, the ILEC would be able to provide a higher speed offering to consumers than would a CLEC. This is because the CLEC's forced to offer slower DSLC service over a substantially greater length of copper running between the remote terminal and the central office.⁶⁴ Therefore, the CLEC is competitively disadvantaged because it is forced to offer a slower DSL service. Thus, where a CLEC is unable to place a line card in the NGDLC, it could be precluded from offering a competitive service.

Third, as detailed in IV.D., it is quite possible that CLECs might be altogether precluded from offering DSL services over home-run copper due to the interference caused by the DSL signals generated at the remote terminal locations.⁶⁵ The inability to either utilize the existing copper plant or collocate an entire DSLAM at a remote location, interferes with Rhythms ability to offer DSL services, CLECs cannot collocate a line card.

Finally, the ILECs are spending billions upon billions of dollars to place advanced services equipment in tens of thousands of remote locations throughout their regions, thus extending their control over in the local telecommunications market into the advanced services market.⁶⁶ As explained in Section IV, the Commission must ensure that the evolution of this new network architecture remains open and proceeds in full contemplation of the competitive network access mandated by the Act. Thus, CLECs should not be forced to spend tens of billions of dollars to overlay ILEC fiber feeder facilities and construct their own adjacent arrangements at each remote location in order to place a DSLAM to perform the necessary

⁶⁴ Joint Declaration ¶ 83. Incumbents typically deploy fiber on longer loops (usually loops over 12 kilofeet). The addition of fiber (typically in the feeder portion of the loop) results in reducing the copper portion of the loop between 9-12 kilofeet. Joint Declaration ¶ 83.

⁶⁵ Joint Declaration ¶¶ 121-126.

multiplexing.⁶⁷ Such mandatory duplicative buildout is extraordinarily inefficient and is not the access contemplated by Congress in the Act.

CLECs are entitled to obtain unbundled loops, including all the features functions and capabilities of the loop.⁶⁸ An unbundled loop is defined as extending between the main distribution frame in the central office and the NID.⁶⁹ CLECs are also entitled to use unbundled loops to provide the services the CLECs choose to provide, regardless whether the ILEC, or its affiliate, chooses to provide the same service or to provision services in the same way.⁷⁰ These obligations do not evaporate when loops are provisioned using NGDLC. CLECs must be able to access their local loop to place DLC line cards, which support all DSL-based services requested by the CLECs, in the DLC housed at the ILEC remote terminals. Indeed, this is precisely what was ordered by the Illinois Commerce Commission when it “require[d] Ameritech to install plug-in cards that support all DSL-based services requested by the CLECs.”⁷¹

To foster facilities-based competition in the advanced services market, competitors must have the freedom to distinguish their services, including distinctions of technology and service quality.⁷² Competitors cannot introduce such innovations unless they are in control of their own electronics. A truly competitive market would result in and be characterized by in a multi-

⁶⁶ Joint Declaration ¶¶ 81-84.

⁶⁷ Joint Declaration ¶ 71.

⁶⁸ 47 C.F.R. § 51.319(a)(1).

⁶⁹ *Local Competition Order* ¶ 381.

⁷⁰ *First Report & Order* ¶ 27; *UNE Remand Order* ¶ 13.

⁷¹ *Rhythms Links, Inc. Petition for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Amendment for Line Sharing to the Interconnection Agreement with Illinois Bell Telephone Company d/b/a Ameritech Illinois, and for an Expedited Arbitration Award on Certain Core Issues*, Docket Nos. 00-0313, et al., Arbitration Decision (I.C.C. Aug. 17, 2000)(“*Illinois Line Sharing Order*”) at 32.

⁷² Joint Declaration ¶ 94-95, 108-110, 112-118; Comments of DATA on SBC’s Request for Interpretation, Waiver or Modification of the SBC/Ameritech Merger Conditions, CC Docket No. 98-141, ASD File No. 99-49, et al. (March 3, 2000)(“DATA Waiver Comments”) at 15.

vendor environment capable of providing the flexibility and interoperability needed for competitors to succeed in the advanced services market.⁷³ From a technical standpoint, the NGDLC environment is clearly capable of hosting cards from multiple vendors supporting multiple types of DSL, including ADSL, RADSL, SDSL, IDSL, HDSL2, and SHDSL.⁷⁴ Indeed, multiple vendor cooperation was exactly the situation that existed prior to the time that Alcatel—now the owner of the Litespan NGDLC equipment that ILECs predominantly deploy—acquired of DSC Communications Corp.⁷⁵ At that time, DSC and Alcatel worked cooperatively to develop line cards that could be inserted into the Litespan DLC equipment.⁷⁶

Although vendors are capable of producing interoperable line cards, there are several reasons why the “true” multi-vendor line card interoperability are not available. First, and perhaps most tellingly, the ILECs have not requested that such interoperability be made available from their vendors, including Alcatel.⁷⁷ Without such a request from the primary purchaser of DLC equipment, vendors have little incentive to develop such options. Second, in order for DSLAM manufacturers to develop cards, certain limited technical specifications are required from the DLC manufacturers, which have not been forthcoming with this information.⁷⁸ Finally, the uncertainty over how the ILECs’ statutory obligations will be enforced constrains the research and development of such innovations by vendors.

If the business plan of a competitor calls for a particular DSL service that requires a plug-in card that the ILEC currently does not use for itself or its affiliate, the burden of proof should

⁷³ DATA Waiver Comments at 15, 16.

⁷⁴ Joint Declaration ¶ 112-113.

⁷⁵ Joint Declaration ¶ 114.

⁷⁶ Joint Declaration ¶ 114.

⁷⁷ Joint Declaration ¶ 109.

lie with the ILEC to demonstrate that the plug-in card is incompatible with NGDLC technology. The Commission can foster such interoperability by establishing a rebuttable presumption that any manufacturer's line card developed in accordance with technical specifications established through industry standard setting efforts are technically and operationally feasible, unless and until the ILEC demonstrates to the applicable state commission that this is not the case.

C. Equipment Rhythms Currently Collocates is "Necessary" for Interconnection and Access to UNEs

The Commission requests that CLECs describe the particular functionalities of the equipment they collocate and explain how that equipment is necessary for interconnection or access to unbundled elements.⁷⁹ A few general observations may aid the Commission in its analysis of these issues. First, Rhythms began placing equipment in collocation arrangements in 1997, well before the Commission issued the *Advanced Services Order*.⁸⁰ Second, the extremely costly prospect of collocation, the restricted access to equipment collocated at the ILEC premises, and general concern over competitive secrets or tampering, all provide incentives for Rhythms to collocate only the most absolutely necessary equipment at the ILEC premises.⁸¹

Specifically, each piece of equipment—detailed in the appended Joint Declaration—that Rhythms places in the collocation arrangement fulfills the proposed definition of "necessary."⁸² One category of equipment placed in the collocation arrangements, which includes DSLAMs and splitters, is required in order to allow Rhythms to effectively access and test unbundled loops or

⁷⁸ DLC Forum at Tr. 69-72.

⁷⁹ 2nd NPRM ¶ 81.

⁸⁰ Joint Declaration ¶ 6.

⁸¹ Joint Declaration ¶¶ 12-13, 15.

⁸² Joint Declaration ¶ 13.

the high frequency portion of loops.⁸³ Use of this equipment is the only way for Rhythms to perform these crucial functions. There should be little question that a refusal to collocate such equipment would interfere with Rhythms' ability to compete effectively and efficiently, because we would be unable to provision, test our services or access the ILEC UNEs.⁸⁴ The remaining equipment Rhythms places in its cage (beyond the necessary racks and cabling) is required to aggregate traffic to efficiently place that traffic on unbundled transport.⁸⁵ Thus, any such refusal would interfere with Rhythms' ability to compete effectively and efficiently.⁸⁶

For the reasons identified above, the Rhythms equipment collocated at ILEC premises could in fact meet a much more stringent "necessary" standard. The collocated equipment enables Rhythms to interconnect and access UNEs.⁸⁷ Without the equipment, Rhythms would not be able to provide services.⁸⁸ If competitive carriers like Rhythms had no ability to provide DSL services, consumers would not receive one of the primary intended benefits of the Act: "the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans."⁸⁹

Over time, the precise equipment placed in each collocation arrangement has evolved as manufacturers have refined the capabilities and expanded the capacity of the equipment.⁹⁰ For example, as the reach of various DSL technologies has been extended by DSLAM

⁸³ Joint Declaration ¶ 13.

⁸⁴ Joint Declaration ¶¶ 10-11, 13-14.

⁸⁵ Joint Declaration ¶ 13.

⁸⁶ Joint Declaration ¶ 13.

⁸⁷ Joint Declaration ¶ 10-11.

⁸⁸ Joint Declaration ¶¶ 10-13.

⁸⁹ 47 U.S.C. 157 nt. (Sec. 706(a)). To affect this purpose, the Commission may utilize "measures that promote competition in the local telecommunications market" or that "remove barriers to infrastructure investment." *Id.*

manufacturers, the type of DSLAMs Rhythms collocates has changed.⁹¹ This new equipment allows Rhythms to serve a broader market and provide a better product (higher speed service) to consumers.⁹² Similarly, as DSLAM capacity increases, thereby allowing Rhythms to serve a greater number of customers from the same size equipment, Rhythms may choose to collocate the higher capacity DSLAM.⁹³ These kinds of equipment innovations and refinements occur constantly in this market and Rhythms actively encourages its vendors to pursue such innovations.⁹⁴

In addition, as the Commission has articulated the Act's requirements, and as ILECs have begun to implement their unbundling obligations, the equipment necessary for collocation has also changed. For example, in December of last year, the Commission order the ILECs to provide as a UNE the high frequency portion of a loop for line sharing. Following the Commission's order on line sharing,⁹⁵ CLECs needed to place "splitters" in the ILEC premises in order to access this new UNE.⁹⁶

Further, as the network architecture evolves, additional equipment may be necessary to interconnect or access UNEs. A telling example is the need for line cards in a NGDLC

⁹⁰ Joint Declaration ¶ 15-18.

⁹¹ Joint Declaration ¶ 12.

⁹² Joint Declaration ¶ 12.

⁹³ Joint Declaration ¶¶ 16-17.

⁹⁴ Joint Declaration ¶¶ 15-16.

⁹⁵ *In the Matters of Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket Nos. 98-147, 96-98, *Third Report and Order in CC Docket No. 98-147*, *Fourth Report and Order in CC Docket No. 96-98*, FCC 99- (rel. Dec. 9, 1999) ("*Line Sharing Order*").

⁹⁶ Joint Declaration ¶¶ 37, 49-51, 88-89.

architecture. As described in these comments, in an NGDLC architecture the most efficient and effective way to interconnect with the ILEC is to collocate a line card in the DLC equipment.⁹⁷

Thus, although the equipment that Rhythms collocates today is necessary for interconnection and access to unbundled elements, what will be necessary tomorrow will in all likelihood evolve.

III. THE APPROPRIATE INTERPRETATION OF “NECESSARY” WILL REQUIRE CROSS-CONNECTIONS BETWEEN COLLOCATORS AND PHYSICAL COLLOCATION STANDARDS NECESSARY TO EFFECTUATE THE GOALS OF THE ACT

There are several physical collocation requirements that are necessary for interconnection and access to UNEs. Specifically, CLECs must be able to cross-connect within the central office with other carriers. The ILECs’ duty to provide physical collocation on “rates, terms and conditions” that are “just, reasonable and nondiscriminatory,”⁹⁸ properly interpreted, means that ILECs may not require competitors to construct separate entrances, to segregate their equipment, or to adhere to minimum space requirements. By elaborating on its articulation of the importance of these policies as developed in the record in this proceeding, the Commission can substantiate these conclusions sufficiently to withstand scrutiny under *Chevron*.

Additionally, consistent with the statutory language and purpose, the Commission should establish the regulatory structure to allow competitors to collocate all “necessary” equipment at the remote terminals, as well as to collocate all equipment “necessary” for line sharing. Finally, to facilitate efficient implementation of these policies, the Commission should set national maximum collocation provisioning intervals to provide national consistency and uniformity.⁹⁹

⁹⁷ Joint Declaration ¶¶ 73, 112.

⁹⁸ 47 U.S.C. § 251(c)(6).

⁹⁹ 47 U.S.C. § 257(b); *See First Report and Order* ¶ 558; *Advanced Services Order* ¶ 13.

**A. Carrier-to-Carrier Cross Connects are “Necessary”
to Effectuate the Goals of the Act**

Section 251(c)(6)’s obligation to provide for collocation of equipment necessary for interconnection or access to UNEs extends to carrier-to-carrier cross connects.¹⁰⁰ Such cross connects fall within the definition of “interconnection” that must be permitted. The Commission defines a cross connect as “[a] connection scheme between cabling runs, subsystems, and equipment using patch cords or jumpers that attach to connecting hardware at each end.”¹⁰¹ In the case of carrier-to-carrier cross connects, this “cabling scheme” is the means of interconnecting two CLEC networks that are both interconnected with the ILEC network. There are several statutory bases for requiring ILECs to permit carrier-to-carrier cross connects on the ILEC premises. First, as discussed in more detail below, carrier-to-carrier cross connects are “necessary” for interconnection or access to unbundled elements because they are “directly related to” interconnection and access to unbundled network elements and an inability to cross connect would interfere with a CLEC’s ability to compete effectively and efficiently. Specifically, without carrier-to-carrier cross connects, efficient and effective interconnection would be precluded. In fact, Rhythms uses the facilities of several CLECs in assembling its own competitive DSL network.¹⁰²

Second, all telecommunications carriers have a statutory obligation “to interconnect directly or indirectly with the facilities and equipment of other telecommunications carriers.”¹⁰³ This provision obligates the CLECs to interconnect with other CLECs. When read in

¹⁰⁰ 47 U.S.C. § 251(c)(6).

¹⁰¹ *UNE Remand Order* ¶ 178, fn. 332, citing *Local Competition Order* ¶ 386.

¹⁰² Joint Declaration ¶ 20.

¹⁰³ 47 U.S.C. § 251(a)(1).

conjunction with other statutory provisions, it also obligates the ILEC to permit the direct interconnection of “other telecommunications carriers.”

Third, this reading is reinforced by Section 256, which charges the Commission with establishing procedures “for the effective and efficient interconnection of public telecommunications networks,”¹⁰⁴ which is not confined to merely interconnection with the ILEC network.¹⁰⁵ In order to ensure “effective and efficient interconnection,” the Commission should require ILECs to permit carrier-to-carrier cross connects. A refusal to permit such cross connections would impose significant *inefficiencies* on CLECs.

Fourth, a refusal to permit collocation of carrier-to-carrier cross connects would result in discriminatory treatment of CLECs through the ILEC in direct contravention of the Section 251(c)(6)’s requirement of “nondiscriminatory rates, terms and conditions.”¹⁰⁶ ILECs can directly interconnect with any CLEC at the ILEC premises. If CLECs cannot cross connect with other CLECs in the ILEC premises, they do not have a nondiscriminatory ability to cross-connect. Therefore, a refusal to allow carrier-to-carrier cross connects is both unreasonable and discriminatory.

Finally, permitting carrier-to-carrier cross connects is consistent with the Commission’s position in the *UNE Remand Order*, that an ILEC has the obligation to provide cross connect facilities as part of “Sections 252(d)(1) and 251(c)(3) at any technically feasible point that a requesting carrier seeks access to the loop” as a “means of interconnecting with a network

¹⁰⁴ 47 U.S.C. § 256(b)(1).

¹⁰⁵ 47 U.S.C. § 256(d) (making clear that the interconnection the Act is concerned with is between “two or more public telecommunications networks used to provide telecommunications service.”).

¹⁰⁶ 47 U.S.C. § 251(c)(6).

element,” because “cross connection offers a potential bottleneck, and incumbents have the incentive to impose unreasonable rates, terms and conditions for cross-connect facilities.”¹⁰⁷

Looking to Section 251(c)(6), the D.C. Circuit concluded that the statute was “focused solely on connecting new competitors to LECs’ networks.”¹⁰⁸ As demonstrated above, however, this conclusion is not supported when the statute is read in its entirety.¹⁰⁹ While Section 251(c)(2) imposes a duty to permit interconnection with the ILEC network, the reference to interconnection in Section 251(c)(6) while obviously encompassing such interconnection is not limited by it.¹¹⁰ Thus, 251(c)(6) imposes an obligation on ILECs to permit efficient CLEC interconnection on the ILEC premises. Carrier-to-carrier cross connects are efficient interconnection and should be permitted.

The court was also concerned that the Commission was “almost cavalier” in requiring ILECs to allow collocators to interconnect their equipment with other carriers because it “did not even attempt to show that cross connects were in any sense ‘necessary for interconnection or access to unbundled network elements.’”¹¹¹ Accordingly, on remand the Commission is not precluded from determining that carrier-to-carrier cross connects are “necessary.” The D.C. Circuit merely required that the Commission show its analysis that carrier-to-carrier cross connects are “in any sense ‘necessary for interconnection or access to unbundled network elements.’”¹¹²

¹⁰⁷ *UNE Remand Order* ¶ 179.

¹⁰⁸ 205 F.3d at 423.

¹⁰⁹ *See Food and Drug Admin. v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120 529 U.S. (2000); *King v. St. Vincent’s Hosp.* 502 U.S. 215 (1991); *Meredith v. Federal Mine Safety and Health Review Com’n*, 177 F.3d 1042, (D.C.Cir. Jun. 04, 1999).

¹¹⁰ 47 U.S.C. § 251(a)(1).

¹¹¹ 205 F.3d at 423.

¹¹² 205 F.3d at 423.

Cross connections between collocators are “directly related to” interconnection and access to unbundled network elements. Cross connects are the method to interconnect the networks of two carriers.¹¹³ Regardless of whether those carriers are ILECs or CLECs, cross connecting with other carriers directly inside the ILEC premises, where all of the carriers have their equipment, is the most efficient possible method of interconnection.¹¹⁴

Additionally, the inability to cross connect directly with other collocators inside the ILEC premises would interfere with a CLEC’s ability to compete effectively and efficiently. For a CLEC to connect with the ILEC network in the central office and then connect to another collocator in a separate location would be inefficient and require unnecessary installation of duplicative facilities and equipment, and in many instances would force competitors to use *more not less* ILEC facilities.¹¹⁵ For example, if CLEC 1 seeks to interconnect with CLEC 2, then must get its traffic to CLEC 2. To do so in the central office requires only a simple cross connect. However, to do so outside the central office would require CLEC 1 to transport the traffic (using ILEC facilities) from the central office to the outside point of interconnection with CLEC 2, who may then need to transport the traffic back to the central office. Thus, there will be two sets of unnecessary facilities being used. In contrast, allowing carriers to construct their own cross connects directly with other carriers reduces the costs and time needed for the connection.¹¹⁶

¹¹³ *UNE Remand Order* ¶ 191.

¹¹⁴ Joint Declaration ¶¶ 21-22.

¹¹⁵ Joint Declaration ¶¶ 21-22.

¹¹⁶ Joint Declaration ¶¶ 21-28.

While efficiency reasons for requiring cross connections between collocators are persuasive,¹¹⁷ there are numerous issues that support the conclusion that carrier-to-carrier cross connects are “necessary.” First, the unnecessary cabling required for indirect cross connects can exhaust cabling space, such as conduits, in the central office.¹¹⁸ Second, direct connections done on the ILEC premises, but not inside the premises, may also further exhaust space in entrance facilities into the central office. Incumbents cannot argue credibly about space exhaustion while also requiring a competitor to take up more space than is actually warranted for efficient cross connection with other carriers. Third, if a collocator is required to cross connect with the incumbent alone, the incumbent reasserts itself over the CLECs’ ability to construct their own facilities-based competitive networks.¹¹⁹ The collocator must endure the ILEC’s long provisioning intervals for the cross connects, and depend upon the ILEC for maintenance and repair.¹²⁰

The Commission recognizes that a cross connect facility may be “as simple as a transmission facility running from one collocation rack to an adjacent rack.”¹²¹ Qwest has acknowledged that by allowing carrier-to-carrier cross connects their “wholesale customers will have faster, easier access to our network, which will create greater competition and more choices for consumers.”¹²² Similarly, SBC allows “collocating telecommunications carriers to

¹¹⁷ The D.C. Circuit ruled that efficiency, standing alone, will not satisfy the “necessary” standard. 205 F.3d at 423.

¹¹⁸ Joint Declaration ¶ 23; *See also* Joint Declaration ¶ 67.

¹¹⁹ Joint Declaration ¶¶ 22, 24, 26-28.

¹²⁰ Joint Declaration ¶ 22.

¹²¹ *Advanced Services Order* ¶ 33.

¹²² *Qwest Communications Announces Landmark Initiative to Open Local Communications Market*, <<http://www.quest.com/home.html>>.

interconnect their networks with that of other collocators at the Company's premises."¹²³ GTE also permits collocators to cross connect with one another within the central office.¹²⁴ Clearly, there is no technical concern raised by carrier-to-carrier cross connections, and indeed it appears that such cross connections are mutually beneficial.

Accordingly, a collocators' ability to cross connect with other collocators is "necessary" for interconnection, because it is "necessary" to effectuate the goals of the Act. The Commission should therefore determine that it is required that collocators have the option of ordering from other collocators as well as the incumbent.

B. Physical Collocation Policies are "Necessary" to Effectuate the Goals of the Act

The collocation rules and policies established by the Commission in the *Local Competition Order* "regarding the incumbent LECs' duty to provide for physical collocation of equipment are consistent with the Act's terms contained in Subsection 251(c)(6)."¹²⁵ Thus, these baseline rules are not the subject of this proceeding. At issue, however, are certain additional rules promulgated by the Commission in the *Advanced Services Order*.¹²⁶ Upon appeal of the *Advanced Services Order*, the D.C. Circuit agreed that "such alternative [cageless] collocation arrangements will foster deployment of advanced services by facilitating entry into the market by competing carriers"¹²⁷ and held that the FCC satisfies its burden "in interpreting § 251(c)(6) as

¹²³ SBC Report of Management on Compliance with the FCC's Collocation Rules at 7 (August 7, 2000).

¹²⁴ California Public Utility Commission, *Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Networks*, R. 93-04-003, I. 93-04-022, Hearing Tr. (Adams) at 10649:15-17; at 10711:4-10714:17; Hearing Tr. (Ries) at 1125:8-11, see also 11226:20-11227:6.

¹²⁵ *Iowa Utils. Bd. v. FCC*, 120 F.3d 753, 818.

¹²⁶ 47 C.F.R. §§ 51.5, 51.321, 51.323.

¹²⁷ *Advanced Services Order* ¶ 39.

requiring cageless collocation.”¹²⁸ While agreeing broadly with the Commission’s findings, the court stopped short of finding that the Commission offered a “good reason” for its conclusions on space determination, separate entrance requirements, and segregation of equipment.¹²⁹ Thus, the Commission seeks comment on three of its policies: the procedure for assigning space, where the space is located, and how the space is accessed.¹³⁰ As demonstrated below, there is sound basis for the rules established in the *Advanced Services Order* and the record in this proceeding will support reinstatement of those rules.

1. In Order to Effectuate the Goals of the Act, the Commission Should Establish National Rules for Use and Restriction of Space

Unless unused space is made available for physical collocation on a nondiscriminatory basis, ILECs will be in a position to impede competition, immeasurably harm efforts to collocate, and completely frustrate the purpose of the Act. The Commission should therefore discourage space exhaustion by adopting national space reservation policies that ensure nondiscriminatory and reasonable policies that apply to ILECs and CLECs alike.

The D.C. Circuit objected to the apparently unqualified ability of CLECs to use space in the ILEC premises. By establishing clear guidelines for space requests and reservation of space that apply equally to CLECs and ILECs, the Commission can ensure that the use of space is both “necessary” and nondiscriminatory as required by Section 251(c)(6). Moreover, a national policy would be consistent with the rulings of more progressive state commissions. The New York Commission, for instance, concluded that to prohibit CLECs from collocating in unused

¹²⁸ 205 F.3d at 425.

¹²⁹ 205 F.3d at 425.

¹³⁰ 2nd *NPRM* ¶ 95.

space would “clearly be a prohibitive burden in those offices where space is already a premium.”¹³¹

Finally, Commission collocation space policies would be “directly related” to interconnection and access to UNEs because the collocation space including the location, cost and access to that space may determine whether the collocator is able to interconnect or access UNEs at that premises at all. This is particularly true in central offices or remote terminals that are very space constrained. There can be no doubt that an inability to obtain, reserve or access collocation space could interfere with CLECs’ ability to compete efficiently and effectively. For example, where some collocated equipment is very expensive or has sufficient capacity to serve the entire customer base of that premises, there would be severe inefficiency if collocators were forced to accept non-contiguous space in the central office, that limits access to that equipment or requires duplicate deployment of such equipment.¹³²

Space assignment policies are also necessary to achieve reasonable and nondiscriminatory physical collocation.¹³³ CLECs are in the best position to select the appropriate space to place their collocation equipment because competitors have the greatest insight into how to efficiently and effectively utilize that space for interconnection or access to UNEs. Therefore, the Commission should establish a presumption that any unused space must be made available for collocation. Further, CLECs should be given access to information that shows what space is available and should be permitted to specify their space preference within the available space, which ILECs should be required to honor, absent a showing of good cause

¹³¹ State of New York Public Utilities Commission, Case 99-C-0715, Case 99-C-0675, Order Directing Tariff Revisions, at 4 (rel. Aug. 31, 1999).

¹³² Joint Declaration ¶¶ 34-35.

¹³³ See *GTE v. FCC*, 205 F.3d at 426.

that it is not feasible to honor the request. Such “good cause” would be a demonstration of technical infeasibility, undue burden or a refusal to relinquish a prior valid request or reservation of the space.

The Commission should set national rules governing reservation of collocation space in central offices. Some states have no rules; other states have inconsistent rules. A single national policy would address both these shortcomings, while also providing significant predictability. Despite the unchallenged 1996 requirement that “[i]ncumbent LECs may not . . . reserve space for future use on terms more favorable than those that apply to other telecommunications carriers seeking to reserve collocation space for their own future use,”¹³⁴ as well as the most recent reiteration “that neither an incumbent LEC nor any incumbent LEC affiliate may reserve space for preferred use on preferential terms,”¹³⁵ many states have failed to take necessary steps to ensure nondiscriminatory implementation of the rule. Further, those states that have ruled apply inconsistent policies that evade best practices and uniformity and cause uncertainty.

Several states have set space reservation policies. For instance, Florida set any space reservation period at 18 months that applies to both ILECs and CLECs.¹³⁶ The California Public Utilities Commission also adopted a policy that limits space reservations at the ILEC premises to one year for equipment similar to that used by collocators and five years for other equipment.¹³⁷ The Texas Commission limits space reservations by the ILEC to one year for transport equipment, three years for digital cross-connect systems, and five years for switching equipment,

¹³⁴ *Local Competition Order* at ¶ 604.

¹³⁵ *Collocation Order on Reconsideration* ¶ 53.

¹³⁶ Florida Public Utility Commission’s Order No. PSC-00-0941-FOF-TP at 56 (released May 11, 2000).

¹³⁷ California Public Utility Commission, *Rulemaking on the Commission’s Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Networks*, Decision 98-12-069, 1998 WL 995609, at 68-69 (Ca. PUC 1998).

power equipment, and main distribution frames.¹³⁸ In Washington, the Utilities and Transportation Commission limits space reservations by the ILEC to one year for transmission equipment and three years for switching equipment.¹³⁹

In stark contrast to these states, however, many states have not set any space reservation policy. To ensure nondiscriminatory treatment and uniform application of best practices, the Commission should adopt a baseline national space reservation period to act as a maximum standard period for carrier space reservation.

As the Commission recognizes, “[s]pace reservation policies should recognize both the importance of providing physical collocation to competitive LECs as well as incumbent LECs’ and competitive LECs’ need to reserve space to meet the future needs of their customers.”¹⁴⁰ The Commission should adopt a space policy that balances these interests in a uniform and nondiscriminatory manner. The Commission’s policy must also recognize incumbents’ incentives to warehouse unused space for their own use, thus denying competitors’ use of such space—and prohibit ILECs from acting on their own incentives.

Further, the Commission should prohibit ILECs from unilaterally reclaiming space for their own use once that space is reserved by or provisioned to a CLEC, particularly because numerous central offices and an even greater number of remote terminals are already facing space exhaust.

¹³⁸ Texas Public Utility Commission, *Investigation of Southwestern Bell Telephone Company’s Entry into the Texas InterLATA Telecommunications Market*, Project No. 16251, Order No. 59 Approving Revised Physical and Virtual Collocation Tariffs, at 3 (Texas PUC Oct. 29, 1999) (*Texas Commission Order No. 59*).

¹³⁹ Washington Utilities and Transportation Commission, *MFS Communication Co.*, Docket Nos. UT 960323 *et al.*, 1998 USWL 996190 (Wash. Util. & Trans. Comm’n 1998).

¹⁴⁰ *Collocation Order on Reconsideration* at ¶ 50.

2. The Commission Has Statutory Authority to Prohibit Unreasonable Segregation and Separate Entrance Requirements and to Require Commingled Equipment in Space Constrained Premises

In the *Advanced Services Order*, the Commission held that “incumbent LECs may not require competitors to collocate in a room or isolated space separate from the incumbent’s own equipment and must allow competitors to collocate. . . without requiring the creation of a separate entrance to the competitor’s collocation space.”¹⁴¹ On appeal, the D.C. Circuit held that the Commission had not given “any good explanation”¹⁴² for the separate entrance requirement nor “any reasonable justification” for the segregation prohibition. The D.C. Circuit did not foreclose the efforts of the Commission to prohibit incumbents’ discriminatory efforts regarding use of space within the ILECs’ premises, holding that “it is hardly surprising that the FCC opted to prohibit LECs from forcing competitors to build cages, particularly given the alternative means available to LECs to ensure the security of their premises.”¹⁴³ The D.C. Circuit affirmed the Commission’s rule that ILECs may not impose unreasonable minimum space requirements on CLECs.¹⁴⁴ However, in response to a petition from Sprint, the Commission seeks comment on the ability of CLECs to collocate in spaces smaller than a rack or bay, including placing equipment on racks with ILEC equipment.

On remand, the Commission should conclude that the requirements of segregated or isolated space and separate entrances is unjust, unreasonable and discriminatory. Additionally, these requirements are, as discussed below, “directly related to” interconnection or access to UNEs and would interfere with a CLEC’s ability to compete effectively and efficiently. Thus,

¹⁴¹ *Advanced Services Order* ¶ 42.

¹⁴² 205 F.3d at 427.

¹⁴³ 205 F.3d at 425.

¹⁴⁴ *2nd NPRM* ¶ 100.

the Commission's collocation rules are "necessary" to interconnection and UNE access as well as to ensure that the terms and conditions for collocation are "just, reasonable, and nondiscriminatory."¹⁴⁵

Requiring construction of separate entrances and segregation of CLEC collocation or equipment and minimum space requirements limits CLEC collocation by prematurely exhausting space in the ILEC premises. Commingling CLEC and ILEC equipment on the same rack or bay may be "necessary"—particularly in space constrained premises, such as remote terminals or "full" central offices—to ensure that CLECs have the maximum ability to collocate equipment for interconnection or UNE access. The barriers posed by a separate entrance requirement—for example, constructing a new entrance to a building—add time and expenses to the collocation process, thus interfering with the CLECs' ability to compete efficiently and effectively.¹⁴⁶ No technical or security reasons exist that justify the time and expense it takes to construct a separate entrance into a central office for collocators.¹⁴⁷

Placing CLEC equipment with ILEC equipment creates no novel technical or security concerns,¹⁴⁸ "particularly given the alternative means available to LECs to ensure the security of their premises."¹⁴⁹ In light of the numerous security measures available and the collective dependency of all carriers on the ILECs' networks, prohibiting ILECs from requiring CLECs to segregate their equipment in separate rooms with separate entrances "ensures that LECs do not place unreasonable minimum space requirements on collocating competitors" and "has the effect

¹⁴⁵ 47 U.S.C. § 251(c)(6).

¹⁴⁶ Joint Declaration ¶ 37.

¹⁴⁷ Joint Declaration ¶ 37.

¹⁴⁸ Joint Declaration ¶ 37.

¹⁴⁹ 205 F.3d at 425.

of reducing the costs of collocation and reducing the likelihood of premature space exhaustion.”¹⁵⁰

For example, prior to the *Advanced Services Order* numerous central offices did not have space available for CLECs to place caged collocation—often the only type of physical collocation the ILECs would permit.¹⁵¹ In many instances where Rhythms initially ordered physical collocation, the ILECs denied Rhythms’ collocation request due to lack of space.¹⁵² The real impact of the segregation policy was that collocation space was exhausted in almost all of the central offices where Rhythms was denied space, because those were the regions of the country with the greatest demand for progressive services.¹⁵³

After cageless collocation became a requirement in the *Advanced Services Order*, in an effort to make more efficient use of the space inside these exhausted central offices, Rhythms sought to convert its existing virtual collocation arrangements to cageless collocation arrangements.¹⁵⁴ Many ILECs refused these requests, citing unsubstantiated security and technical concerns to keep the ILEC and CLEC equipment separate.¹⁵⁵ As a result, Rhythms still does not enjoy the benefits of physical collocation in numerous central offices serving millions of consumers. Because ILECs prohibit Rhythms from having direct physical access to its

¹⁵⁰ 205 F.3d at 425.

¹⁵¹ Joint Declaration ¶ 36.

¹⁵² Joint Declaration ¶ 36.

¹⁵³ Joint Declaration ¶ 36.

¹⁵⁴ Joint Declaration ¶ 36.

¹⁵⁵ Joint Declaration ¶ 36.

virtually collocated equipment,¹⁵⁶ the result is that Rhythms' access to UNEs is significantly diminished.

Additionally, the equipment segregation policies of the ILECs merely waste coveted space within the ILEC premises, while requiring CLECs to purchase additional facilities from the ILECs, thus increasing competitors costs and decreasing competitors effectiveness in competing.¹⁵⁷ Relegating CLECs to separate rooms or space may affect the distance between the CLECs' equipment and the ILEC equipment and facilities with which the CLECs must interconnect.¹⁵⁸ For instance, the further the CLECs' equipment is from the ILECs' main distribution frame, the more cabling and cable racking the competitors must purchase from the ILECs.¹⁵⁹

Additionally, when the ILECs insist on placing the CLEC equipment in separate rooms, the ILECs frequently insist that the separate room be "conditioned" for physical collocation, increasing both the cost and the delay in obtaining collocation.¹⁶⁰ For example, in the Verizon-South region, Rhythms and other competitors were routinely charged hundreds of thousands of dollars to "condition" space for collocation.¹⁶¹

The need to "prepare" space is frequently stated as the justification for an ILEC to increase both the time and costs for collocation.¹⁶² Such increases in the time and costs of collocation and length of delivery of collocation eclipse the benefits of collocating cageless

¹⁵⁶ In a virtual collocation arrangement, Rhythms does not even have title to the equipment. Joint Declaration ¶ 37.

¹⁵⁷ Joint Declaration ¶ 37.

¹⁵⁸ Joint Declaration ¶ 37.

¹⁵⁹ Joint Declaration ¶ 37.

¹⁶⁰ Joint Declaration ¶ 37.

¹⁶¹ Joint Declaration ¶ 37.

arrangements, thus further interfering with Rhythms' ability to compete efficiently and effectively.¹⁶³

Requiring any carrier to purchase more space than the carrier intends to use, regardless of how nominal the difference, results in inefficient use of space or unused space and premature exhaust of available space.¹⁶⁴ As the D.C. Circuit recognized, such a result is untenable in the face of space exhausted premises.¹⁶⁵ Removing minimum space requirements encourages a competitor to configure the most condensed arrangement using the smallest amount of space in order to collocate the greatest amount of functionality at the least cost.¹⁶⁶ Because arrangements without minimum space requirements would make more efficient use of space, physical collocation of CLEC equipment within the same racks or bays as ILEC equipment is a practical solution to space shortages within ILEC premises, particularly remote terminals.¹⁶⁷

To achieve reasonable and nondiscriminatory physical collocation in premises having insufficient space to accommodate competitors' physical collocation requests, the ILECs must allow the placement of ILEC and CLEC equipment together within the ILEC premises. The Commission has stated that "the incumbent LEC may not impose discriminatory security requirements that result in increased collocation costs without the concomitant benefit of providing necessary protection of the incumbent LEC's equipment."¹⁶⁸ An ILEC may not require a CLEC to construct or pay for a wall, structure, or buffer separating the ILEC's equipment from

¹⁶² Joint Declaration ¶ 37.

¹⁶³ Joint Declaration ¶ 36.

¹⁶⁴ Joint Declaration ¶ 41.

¹⁶⁵ 205 F.3d. 416.

¹⁶⁶ Joint Declaration ¶ 41.

¹⁶⁷ Joint Declaration ¶ 41.

¹⁶⁸ *Advanced Services Order* ¶ 47.